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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,397	07/11/2003	Masahide Matsuura	240064US0	3310
22850	7590	02/09/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			THOMPSON, CAMIE S	
			ART UNIT	PAPER NUMBER

1774

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/617,397	MATSUURA ET AL.	
	Examiner	Art Unit	
	Camie S Thompson	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>11/17/2003</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

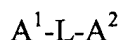
Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 5-9 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 5-7 are rendered indefinite because they are not commensurate with the scope of claim 2 from which they can depend. Claim 2 recites B as being at least one compound selected from anthracene derivatives represented by general formula (I)



and anthracene derivatives represented by general formula (II)



Claims 5 and 6 recite B as being a spirorfluorene derivative or a condensed ring respectively.

Claim 7 recites B as being an aluminum chelate complex compound.

Claims 8 and 9 are rendered indefinite because X is not defined. X^3 is defined. However, X^3 is not in formula V.

Art Unit: 1774

Claim Rejections - 35 USC § 102

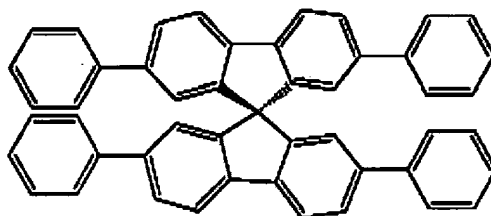
3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

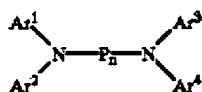
4. Claims 1, 10-13 and 15-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Xie et al., U.S. Patent Number 5,989,737.

Xie discloses an organic electroluminescent device comprised of an anode and cathode, a organic hole injecting and transporting layer, an organic electron injecting and transporting layer wherein the organic hole injecting and transporting layer is comprised of a mixture of a tertiary aromatic amine and a polycyclic aromatic hydrocarbon compound such as spirofluorene derivative



as described in instant claims 1 and 16 (see column 3, lines 20-34 and column 11, lines 1-10).

Additionally, the Xie reference discloses an aryl amine such as



Art Unit: 1774

that reads on instant claims 10 and 11 when P_n is an arylene and n is an integer from 1 to 4.

Also, the aryl amine of the Xie reference reads on the instant claims when g, h, i, j, k and m are 0 and n is 1 (see column 5, lines 4-39). Column 6, lines 7-19 of the Xie reference discloses that the effective amounts of the polycarbocyclic aromatic compounds vary from about 0.1 to 50 weight percent. Thereby, making the effective amounts of the aryl amine from about 50 to 99.9 weight percent, which would read on instant claim. It is disclosed in column 13, lines 4-16 that the thickness of the hole injecting and transporting layer comprising the polycarbocyclic aromatic compound and the aryl amine is in the range from about 50 to about 2000 Å as per instant claim 15. Column 4, lines 58-68 of the reference discloses the anode can have indium tin oxide, tin oxide or zinc oxide disposed on it as per instant claim 13.

5. Claims 1-4, 7, 14 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakaya et al., U.S. Patent Number 6,203,933.

The Nakaya reference discloses an organic electroluminescent element comprised of two electrodes, an anode and a cathode, a hole injecting and transporting layer, a light emitting layer and an electron injecting and transporting layer (see Figure 1). Additionally, the reference discloses an organic electroluminescent element comprising at least one compound layer that is a light emitting layer containing a compound of the following formula (I)



When m is two (2) and Ar is an aromatic-bearing group (such as a naphthyl group) and L is a condensed polycyclic aromatic compound having 3 to 10 rings (such as anthracene), the

Art Unit: 1774

reference reads on instant claims 1-3 and 17 (see column 1, lines 45-68). Also, the Nakaya reference reads on the instant claims when the light-emitting layer is a mix layer that contains



at least one hole injecting and transporting compound such as an aryl amine (column 36, line 1-column 37, line 5) and electron injecting and transporting compounds such as tris(8-quinolinolato)aluminum as per instant claims 7 and 14 (see column 38, lines 1-68). The reference also discloses that the light-emitting layer can comprise derivatives represented by the general formula




wherein A^1 and A^2 each are a monophenylanthryl or diphenylanthryl group and L^1 can be a valence bond or $-O-$, $-S-$, or $-NR-$ with R being an alkyl or aryl group as per instant claim 4 (see column 34, line 49-column 35, line 14).

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (571) 272-1530. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena L Dye, can be reached at (571) 272-3186. The fax phone number for the Group is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 1774

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


RENA DYE
SUPERVISORY PATENT EXAMINER 2/4/05
A.U. 1774